



G20: The G20 Strategy to promote open innovation cooperation

The G20 Research and Innovation Working Group (RIWG),

Recalling the importance of promoting inclusive collaborations in research and innovation to achieve the Sustainable Development Goals (SDGs)¹, and the commitment to pursue development models that implement sustainable, inclusive and just transitions globally, while leaving no one behind;^{2,3}

Recognizing that global crises and related challenges—such as climate change, biodiversity loss, waste, pollution, and health emergencies—have no borders, and global solutions, especially through active international cooperation in science, technology, and innovation (STI), are key to address them;

Acknowledging that the rise of digital technologies and the growing mobility of highly-skilled people facilitate co-creation and co-design of new products and services⁴, leading to the emergence of open innovation models that advance the innovation process to facilitate collaboration, voluntary technology transfer on mutually agreed terms, and learning;

Noting that open innovation has contributed to shaping technological development and the emergence of the digital world;

Recognizing that open innovation is a distributed innovation process based on partnership, cooperation, and voluntary knowledge flow across organizational boundaries on mutually agreed terms. Open innovation leverages both internal and external resources for individuals, firms and other institutions in the innovation ecosystem to unlock the latent economic value of ideas and knowledge. This collaborative process highlights the importance of a strong innovation ecosystem and innovator-led approach that prioritizes voluntary partnerships and respect for intellectual property;

Recognizing the potential of open innovation, open science, and evidence-based policy making in accelerating the implementation of the SDGs, particularly for SDG 9 on promoting inclusive and sustainable industrialization and fostering

¹ G20 Research Ministerial Meeting, Outcome Document and Chair's Summary, Mumbai, 5 July 2023

² G20 Bali Leaders' Declaration Bali, Indonesia, 15-16 November 2022.

³ One earth, one family, one future. G20 New Delhi Leaders' Declaration New Delhi, India, 9-10 September 2023.

⁴ Background notes on Open Innovation for International Cooperation, prepared by UNCTAD.



innovation, and SDG 17 on strengthening the means of implementation and revitalizing the Global Partnership for Sustainable Development;

Highlighting that an inclusive, participatory, fair, equitable, secure, and non-discriminatory approach of open innovation is essential to enhance international cooperation in STI, promote the co-creation of solutions that benefit all participants, and bridge the knowledge and technology gaps within and across countries, thus reducing the existing asymmetries in accessing and developing new technologies. We affirm our commitment to fostering open innovation to strengthening international cooperation in STI;

We recommend the creation of a G20 Open Innovation Strategy to promote international open innovation initiatives that benefit all involved stakeholders as follows.

Framework

The overarching objective of the strategy is to foster knowledge exchange, strengthen international cooperation in STI, and facilitate the voluntary transfer of technologies on mutually agreed terms and the co-creation and co-design of global and local solutions for the benefit of all participants, and to address global crises and related challenges, overcome technological dependencies, and assist countries to achieve the 2030 Agenda for Sustainable Development.⁵

We stress the importance of providing support and incentives, including tools and frameworks, for the strengthening or development of international communities of practice for open innovation.

We recognize the role of publicly funded science and research institutions in supporting open innovation, as well as the importance of aligning incentives to fostering public-private partnerships that can accelerate the transformation of science into new technologies, products, and services to be diffused in the market to advance our economies.

We welcome initiatives favoring the exchange of personnel between industry and research institutions. In this respect, we encourage countries to facilitate the mobility of highly skilled personnel and researchers and support cross-institutional collaborations, while strengthening local research and innovation ecosystems.

We recognize that sharing information and providing access to research facilities, while addressing privacy and security concerns, are key factors to reduce STI

⁵ Transforming our world: the 2030 Agenda for Sustainable Development. A/RES/70/1, United Nations (<https://sdqs.un.org/2030agenda>).



asymmetries and allow for inclusive development that benefits all involved stakeholders.

We strongly encourage actions aiming at the creation of a shared vision of international collaboration, including a culture of open science and open innovation, to develop trust building mechanisms among people and communities.

We recommend initiatives be aimed at increasing the STI capabilities of partners and aligning business objectives with industrial improvements and broad societal considerations and innovation to support and boost human talent development and social welfare. Initiatives should include arrangements about how research outcomes and innovations would be shared and reused.

We recommend countries strengthen the integration of existing knowledge networks and leverage existing mechanisms and collaborations to support the STI capacity development with developing countries.

We recommend voluntary initiatives grounded on mutually agreed terms and in line with applicable law and with the principles and general approach identified in this recommendation.

Principles and General Approach

The principles and general approach of international open innovation initiatives should be based on legal, ethical, scientific, technological, and market considerations, including: (i) The use of technology for the benefit of society; (ii) Respect for diverse cultures, human rights, research ethics, and integrity; (iii) Sustainability, consistent with the 2030 Agenda for Sustainable Development; (iv) Voluntary adherence to transparency, accountability, and reproducibility; (v) Collaboration based on reciprocity; (vi) Responsibility and respect, including for privacy, intellectual property, and national security; (vii) Diversity, equity, inclusion, and accessibility; (viii) Flexibility; and (ix) Fair competition promoting mutual benefits.

Tools

We recognize that the landscape of tools or mechanisms that could be part of open innovation initiatives is still developing, and we encourage studies to provide a landscape of possible options, assessing their effectiveness, as well as strengths and weaknesses in particular settings.

We endeavor to promote the use of tools listed below as potential building blocks of international open innovation initiatives.

We affirm the importance of open and public access, open science platforms, open source, and the use of FAIR (Findable, Accessible, Interoperable, and



Reusable) data principles for open data, as well as principles and frameworks for ethical data governance, such as CARE (Collective benefits, Authority to control, Responsibility and Ethics), not only as cornerstones of open science but also as means to accelerate innovation.

We underscore the importance of public participation and community engagement to inform open science and bolster public trust.

We encourage international open innovation initiatives involving collaboration among research centers, universities, and companies, including startups and small and medium-sized enterprises. These initiatives can efficiently use research and digital infrastructures to close technological gaps within and among countries by providing access to physical facilities and services to researchers, technological startups, and small and medium-sized enterprises of all countries, in particular developing countries.

We welcome initiatives that support the voluntary sharing, translation, and utilization of technologies and innovations on mutually agreed terms that may serve to address global challenges, such as those needed to facilitate the transition towards net-zero greenhouse gas emissions/carbon neutrality.

We encourage international collaborations and competitions of ideas (e.g. hackathons) aimed at sustainable development actions. We recognize the potential of collaborative platforms, crowdsourcing, and citizen science in fostering internationally distributed problem-solving approaches, highlighting the importance of incorporating considerations related to fair compensation and ethical treatment of contributors.

We support the promotion of voluntary knowledge exchange and transfer partnerships on mutually agreed terms; multilateral research, development, and innovation financing platforms; as well as multilateral platforms for technology assessment and foresight. These tools can help improve the understanding of current and upcoming developments in STI and the associated implications for economies and societies, thus supporting well-informed decision-making and consensus-building around emerging STI issues.

We welcome initiatives that promote exchanges of scientists and researchers. We encourage capacity-building and training in all countries, in particular developing countries, in fields such as artificial intelligence, energy transition, health, environmental protection, and S&T-enabled poverty reduction, and other STI topics relevant for addressing global challenges and the SDGs.

Way forward



We recognize the importance of working together to foster innovation at the international level as well as to develop tools, mechanisms, and outline strategic actions and measurement frameworks to assess their effectiveness.

We endeavor to take concrete actions to foster capacity building and mobility programs, strengthen public-private partnerships, develop guidelines for international open innovation activities, and showcase examples and best practices of successful international initiatives for open innovation.

While paving the way for international initiatives on open innovation, we highlight the importance of strengthening the collaboration of the G20 RIWG with other bi- and multilateral settings, especially the United Nations, to foster the convergence of efforts and efficient use of resources.